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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,610	08/11/2005	Franz Laermer	10191/4116	9981

26646 7590 10/09/2007

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EXAMINER	
HO, HOANG QUAN TRAN	
ART UNIT	**PAPER NUMBER**
2818	

NOTIFICATION DATE	DELIVERY MODE
10/09/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@kenyon.com

TH

Office Action Summary	Application No.	Applicant(s)	
	10/524,610	LAERMER ET AL.	
	Examiner	Art Unit	
	Hoang-Quan Ho	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant did not submit any amendment in a response filed September 10, 2007 after the Final Office Action mailing date of June 15, 2007. Currently, claims 16 – 28 are pending.

Response to Arguments

Applicant's arguments filed September 10, 2007 is acknowledged and is responded as follows.

Applicant's arguments, see pgs. 2 – 3, with respect to the rejections of claims 16 – 28 have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made as follows.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16 – 18, 20, and 23 – 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura et al. (U.S. Patent No. 5,604,380), hereinafter as Nishimura.

Regarding claim 16, at least fig. 2d of Nishimura teaches a layer system, comprising:

an etching layer, whereby the etching layer is a silicon layer (ref. no. 1; the Examiner would like to direct Applicant's attention that they are only defining a silicon layer as an etching layer as defined by claim 1, for which does not further limit the claimed invention as prior art reads on the claimed limitation by disclosing a silicon layer which equates to Applicant's definition of an etching layer is a silicon layer); and

a passivation layer applied at least regionally to a surface of the silicon layer (as seen in fig. 2d), wherein:

the passivation layer includes a first, at least largely, inorganic partial layer (ref. nos. 4 and/or 6) and a second partial layer, and the second partial layer is made of an organic compound (ref. no. 5).

Regarding claim 17, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the organic compound contains a halogen (col. 13, lines 46 – 50; examples and tables in the disclosure).

Regarding claim 18, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein: the organic compound includes a silane corresponding to one of an organic fluorine silane, an organic fluorochlorine silane, and a siloxane (col. 10, lines 55 – 67).

Regarding claim 19, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the organic compound has the general formula R_a-R_b-$Si(X)_{3-n}$-$(R_c)_n$, R_a being a perfluorinated polyether or a perfluorinated alkyl group having 1 to 16 carbon atoms, especially 6 to 12 carbon atoms, R_b and R_c being an alkyl group, and X being a halogen, an acetoxy group or an alkoxyl group, and n having a value of 0 to 2 (col. 22, lines 39 – 42).

Regarding claim 20, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the first partial layer is at least largely composed of an oxide layer including a silicon oxide (ref. no. 4).

Regarding claim 23, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the first partial layer is directly applied one of (a) to the silicon layer and (b) on a layer of silicon oxide situated on the silicon layer (as seen in fig. 2d).

Regarding claim 24, at least fig. 2d of Nishimura teaches the layer system as recited in one claim 16, wherein the second partial layer is a self-assembled monolayer (col. 22, lines 39 – 42).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 21 – 22 and 25 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura as applied to claim 16 above.

Regarding claim 21, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, but Nishimura does not explicitly teaches wherein the first partial layer has a thickness of 1 nm to 100 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Nishimura with the first partial layer thickness, in order to achieve desirable thickness.

It would have been obvious to choose certain measurement, since such a modification would have involved a mere change in the size of a component. A change

in size is generally recognized as being within the level of ordinary skill in the art. See of the following: *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide certain measurement, since it has been held that discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); *In re Huang*, 100 F.3d 135, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996).

Regarding claim 22, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the first partial layer has a thickness of 1 nm to 20 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Nishimura with the first partial layer thickness, in order to achieve desirable thickness.

It would have been obvious to choose certain measurement, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. See of the following: *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d

1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide certain measurement, since it has been held that discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); *In re Huang*, 100 F.3d 135, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996).

Regarding claim 25, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the second partial layer has a thickness of 0.5 nm to 30 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Nishimura with the second partial layer thickness, in order to achieve desirable thickness.

It would have been obvious to choose certain measurement, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. See of the following: *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide certain measurement, since it has been held that

discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); *In re Huang*, 100 F.3d 135, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996).

Regarding claim 26, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the second partial layer has a thickness of 5 nm to 20 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Nishimura with the second partial layer thickness, in order to achieve desirable thickness.

It would have been obvious to choose certain measurement, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. See of the following: *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide certain measurement, since it has been held that discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); *In re Huang*, 100 F.3d 135, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996).

Regarding claims 21 – 22 and 25 – 26, there is no evidence indicating the thickness of first and second partial layers are critical and it has been held that it is not inventive to discover the optimum or workable range of a result-effective variable within given prior art conditions by routine experimentation. See MPEP § 2144.05.

Note that the specification is believed not containing any disclosure of either the critical nature of the claimed dimensions of any unexpected results arising there from. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the Applicant must show that the chosen dimensions are critical. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Regarding claim 27, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the passivation layer protects the silicon layer with respect to an etch attack by a gaseous halogen fluoride including one of ClF_3 and BrF_3.

Claim 27 is drawn to the process by which the product is made. Such product by process limitation does not structurally distinguish over the reference. The recited limitation is drawn to a process by which the product is made. Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Such product by process limitation does not

structurally distinguish over the cited prior art. See MPEP § 2113.

Regarding claim 28, at least fig. 2d of Nishimura teaches the layer system as recited in claim 16, wherein the passivation layer is free of micro-scale or nano-scale channels which are permeable for a gas including one of ClF_3, BrF_3 and a vapor.

Claim 28 is drawn to the process by which the product is made. Such product by process limitation does not structurally distinguish over the reference. The recited limitation is drawn to a process by which the product is made. Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Such product by process limitation does not structurally distinguish over the cited prior art. See MPEP § 2113.

Conclusion

Applicant's amendment dated March 26, 2007 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to

the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Quan Ho whose telephone number is (571) 272-8711. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on (571) 272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HQH/
Hoang-Quan Ho
Junior Examiner
September 24, 2007

Andy Hugh

Andy Hugh
Primary Examiner